OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

Sample Rating Trend


VISCOSITY

Area
**PROCESS CHEESE [98739265]**
Machine Id
**CHS PHS BAY C (S/N UP900138)**
Component
**Pump**
Fluid
**ISO 68 (1 LTR)**

## DIAGNOSIS

**Recommendation**
The oil change at the time of sampling has been noted. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

**Fluid Condition**
The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0114285** | --- | --- |
| Sample Date | | Client Info | | **21 Jan 2024** | --- | --- |
| Machine Age | days | Client Info | | **0** | --- | --- |
| Oil Age | days | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **Changed** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >.1 | **NEG** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >90 | **<1** | --- | --- |
| Chromium | ppm | ASTM D5185m | >5 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185m | >3 | **<1** | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >7 | **2** | --- | --- |
| Lead | ppm | ASTM D5185m | >12 | **0** | --- | --- |
| Copper | ppm | ASTM D5185m | >30 | **<1** | --- | --- |
| Tin | ppm | ASTM D5185m | >9 | **<1** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | --- | --- |
| Barium | ppm | ASTM D5185m | | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | **<1** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Calcium | ppm | ASTM D5185m | | **2** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | **490** | --- | --- |
| Zinc | ppm | ASTM D5185m | | **0** | --- | --- |
| Sulfur | ppm | ASTM D5185m | | **1368** | --- | --- |

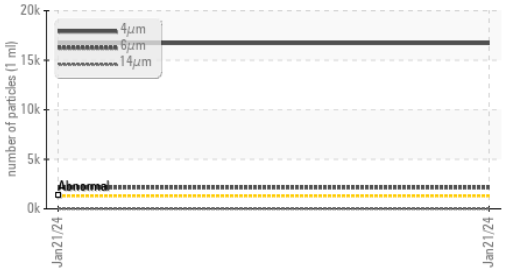
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >60 | **2** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **0** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >1300 | ▲ **16715** | --- | --- |
| Particles >6µm | | ASTM D7647 | >320 | ▲ **2143** | --- | --- |
| Particles >14µm | | ASTM D7647 | >80 | **19** | --- | --- |
| Particles >21µm | | ASTM D7647 | >20 | **3** | --- | --- |
| Particles >38µm | | ASTM D7647 | >4 | **0** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >17/15/13 | ▲ **21/18/11** | --- | --- |

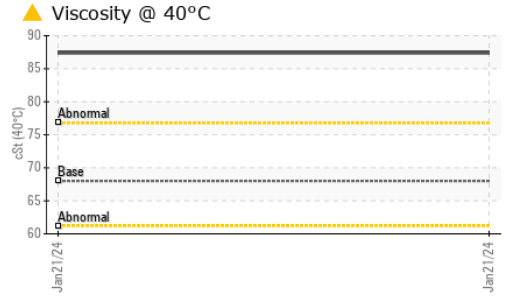
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.28** | --- | --- |

# OIL ANALYSIS REPORT

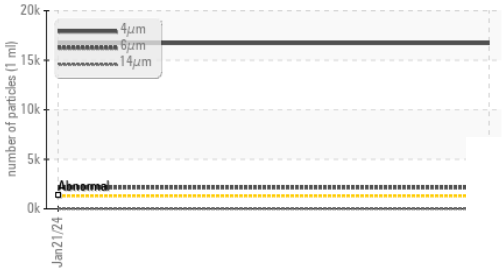
Particle Trend



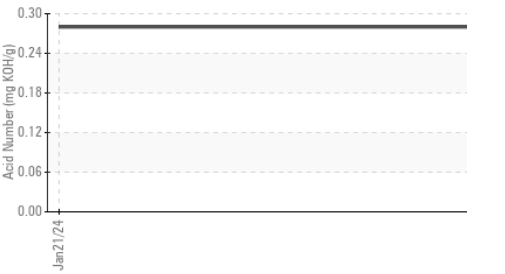

Viscosity @ 40°C




Particle Trend

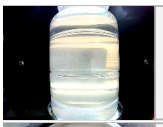



Acid Number



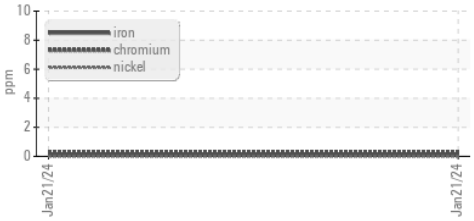

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Debris | scalar | *Visual | NONE | **NONE** | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | --- | --- |
| Odor | scalar | *Visual | NORML | **NORML** | --- | --- |
| Emulsified Water | scalar | *Visual | >.1 | **NEG** | --- | --- |
| Free Water | scalar | *Visual | | **NEG** | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 68.0 | ▲ **87.4** | --- | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

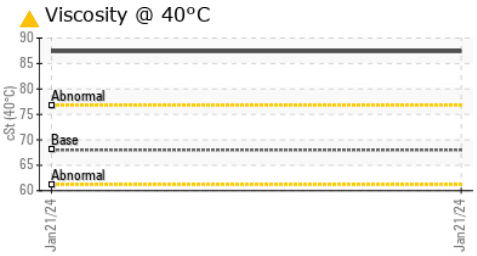
## GRAPHS

Ferrous Alloys

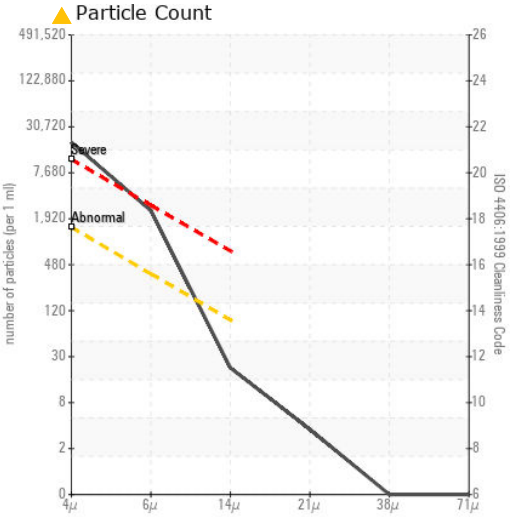



Non-ferrous Metals

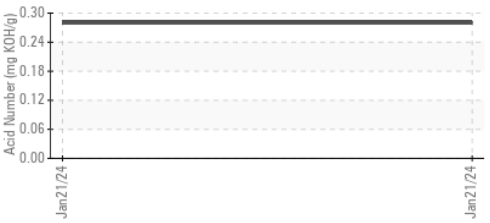

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0114285 **Recieved** : 30 Jan 2024
**Lab Number** : 06074666 **Diagnosed** : 01 Feb 2024
**Unique Number** : 10856757 **Diagnostician** : Jonathan Hester
**Test Package** : IND 2 ( Additional Tests: PrtCount )

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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